Office-Supreme Court, U.S.
FILED
1983
ALEXANDER L. STEVAS,
CLERK

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to The United States Court of Appeals for The District of Columbia Circuit

BRIEF FOR RESPONDENT PEOPLE AGAINST NUCLEAR ENERGY

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January 29, 1983

QUESTION PRESENTED

Whether the National Environmental Policy Act of 1969 requires the Nuclear Regulatory Commission to consider the impact of reopening Three Mile Island Unit No. 1 on the psychological health of surrounding residents where (1) the impact is alleged to involve medically recognized damage to human psychological health in an area where such damage has already occurred as a result of the accident at Three Mile Island Unit No. 2, (2) the health damage would be directly caused by the alteration of the human environment of the area by the restart of Unit 1, and (3) the health damage is directly related to the potential for physical harm from a nuclear accident should the restart of Unit No. 1 be allowed.

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BRIEF FOR RESPONDENT PEOPLE AGAINST NUCLEAR ENERGY

OPINIONS BELOW

The opinions and judgment of the court of appeals are reported at 678 F.2d 222.[1] They are reproduced in Appendix A to the petition in No. 81-2399, as are all pertinent orders and opinions of the Nuclear Regulatory Commission.[2]

[1] All of the parties to the decision below are identified in the captions to this brief.

[2] We will refer to the Appendix to the petition in No. 81-2399 as "Pet. App."

JURISDICTION

The grounds for jurisdiction are adequately stated by the petitioners.

STATUTE INVOLVED

Sections 2, 101, 102 of the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4331, and 4332 (1976), are reproduced in Appendix A to this brief.

STATEMENT

1. On March 28, 1979, Unit No. 2 of the Three Mile Island nuclear power plant ("TMI-2") suffered a serious nuclear accident, described by the President's Commission on the Accident at Three Mile Island as "the worst crisis yet experienced by the nation's nuclear power industry."[3] Three Mile Island Unit No. 1 ("TMI-1") shares the same site with Unit No. 2, but was not involved in the accident. By coincidence, it was not in operation when the accident occurred.

As a result of the accident at TMI-2, the Nuclear Regulatory Commission ("NRC" or "Commission") determined that it

> lack[ed] the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility, a nuclear power reactor of the same design, can be operated without endangering the health and safety of the public.[4]

Accordingly, the Commission directed that TMI-1 remain shut down pending further order.

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[3] *Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI* 35 (1979) (Joint Appendix 90. We will refer to the Joint Appendix as "J.A."). [Hereinafter cited as *President's Commission Report*].

[4] 44 Fed. Reg. 40,461 (1979) (J.A. 8).

The Commission further directed that a public hearing be held prior to the restart of TMI-1, and it detailed the issues to be addressed in the hearing. Among these issues was the need for and sufficiency of a number of "short-term" technical actions that the Commission proposed to require as a prerequisite to the restart of TMI-1.[5] In addition to its technical concerns, the Commission invited briefs on the question of whether psychological damage related to the Unit 2 accident could be legally relevant to the proceeding.[6]

2. People Against Nuclear Energy ("PANE"), respondent in both of these dockets, was formed in the months following the accident by local residents living within five miles of Three Mile Island. Its members are primarily working people and their families, most of whom have lived in the area for many years, some for generations. Before the accident, most PANE members had no particular views about nuclear power; few, if any, opposed the original licensing of either reactor at Three Mile Island.[7]

The accident at TMI-2 profoundly changed the lives of PANE's members and their neighbors. Where they had previously been secure in their families, homes, and neighborhoods, many, including children, began to suffer symptoms of psychological health damage. These symptoms included preoccupation with the accident and its hazards, increased tension, an intense feeling of personal helplessness and vulnerability, and unexplainable physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. As a result, PANE intervened in the restart hearing, raising its primary concern—that restart of TMI-1 would perpetuate the psychological health damage originally caused by the accident at Unit 2 and cause further impairment of psychological health

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[5] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI 79-8, 10 N.R.C. 141, 144-45, 148 (1979) (J.A. 9, 13-15, 19).

[6] *Id.* at 148 (J.A. 20).

[7] For these reasons, the name "People Against Nuclear Energy" is a misnomer. PANE was formed out of a concern about the Three Mile Island area, not about nuclear power in general.

such that recovery from the effects of the accident would become impossible.[8]

3. The accident at Unit 2 was completely unexpected. It occurred only three months after the reactor had entered commercial operation, despite extensive safety reviews and hearings before the Commission's Atomic Safety and Licensing Board.[9]

The accident involved a series of events that the designers of the plant had not anticipated. Commission licensing requirements at the time reflected the view that this sort of accident, said to be beyond the "design basis" for the reactor, was so unlikely that there was no need to consider its potential consequences in deciding whether the reactor should be licensed. 45 Fed. Reg. 40,101-02 (1980). During the first several days of the accident, when public information was incomplete and confusing, neither the Utilities nor the Commission clearly understood the severity of the accident. By Friday, March 30, 1979, two days after the accident began, the Governor of Pennyslvania believed the threat to public health and safety to be sufficiently grave to urge an immediate evacuation of pregnant women and preschool children living within five miles of the reactor. Tens of thousands of surrounding residents left the area.[10]

According to the President's Commission, the accident got sufficiently out of hand "that those attempting to control it were operating somewhat in the dark."[11] The President's Commission concluded that the accident pushed expert knowledge beyond the understood to the "experimental," creating an

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[8] PANE's contentions are set out at Pet. App. 115a-116a. The first contention, which specifically alleges psychological health damage as a result of restart, is the focus of this case. It is reproduced in Appendix B to this brief. The second contention, which alleges community deterioration, is not at issue in this case. The court below held that it represented a classic socioeconomic issue and, as such, does not trigger the EIS requirement in itself, but must be considered if an EIS is prepared. (Pet. App. 17a-18a).

[9] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 2), LBP-77-70, 6 N.R.C. 1185, 1186-87, 1228-31 (1977).

[10] *President's Commission Report, supra* note 3, at 13, 15 (J.A. 90, 93).

[11] *Id.* at 15 (J.A. 93).

unacceptably high level of uncertainty that the "accident could result in major releases of radioactivity."[12] Fortunately, although there was massive damage to the radioactive core of the reactor, a disaster with extensive radiation exposure was averted.[13] The President's Commission concluded that "the most serious health effect of the accident was severe mental stress, which was short lived."[14]

4. The regulations of the Nuclear Regulatory Commission provide that contentions proffered by an intervenor such as

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[12] *Id.*

[13] *Id.* Petitioners Metropolitan Edison Co., et al., ("Utilities") suggest at page 14 of their brief that the psychological health damage caused by the accident resulted largely from misinformation about radiation levels and the danger of a hydrogen explosion. According to their reasoning, psychological health damage here is inconsistent with reality because it resulted from perceptions of danger that did not, in fact, exist. NRC Commissioner Bradford pointed out that, to the contrary, many mistakes in the assessment of the TMI-2 accident resulted in public statements that were unduly reassuring. For example, during the early stages of the accident when all assessments and statements were optimistic, the reactor core was partially uncovered for several hours. Commissioner Bradford concluded that there was a real danger during the accident and that psychological stress reactions "cannot be dismissed as irrational or unrelated to radiation hazard." *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 N.R.C. 607, 623 n.7 (1980) (Pet. App. 96a-97a) [hereinafter cited as *Commission Decision*]. Moreover, although a hydrogen explosion occurred on the first day of the accident, no one recognized it as such until the following day. 1 Rogovin, *Three Mile Island—A Report to the Commissioners and to the Public* 42-43 (1980). In addition, the Commission's own Special Inquiry Group found that the reactor came within only 30 to 60 minutes of "the accident that we had been told by many in the industry could not happen: a core meltdown." *Id.* at 91.

[14] *President's Commission Report, supra,* note 3, at 13 (J.A. 90). The conclusion that the stress was short-lived was reached only a few months after the accident, before it was possible for long-term effects to have been discovered. Later surveys, filed with the Commission as a result of the remand by the court below, have shown that the conclusion was incorrect. The number of people suffering from post-traumatic health impairments has risen over time. *See, e.g.,* A Baum, R. Gatchel, R. Fleming, and C. Lake, Chronic and Acute Stress Associated with the Three Mile Island Accident and Decontamination: Preliminary Findings of a Longitudinal Study (1981); E. Bromet, Three Mile Island: Mental Health Findings (1980); P. Houts, R. Miller, G. Tokuhata, and K. Ham, Health Related Behavioral Impact of the Three Mile Island Nuclear Incident, pt. 2 (1980).

PANE shall be admitted upon a showing of "the bases for each contention set forth with reasonable specificity." 10 C.F.R. § 2.714(b) (1982). In this case, the Commission's Licensing Board took the additional step of requiring intervenors intending to raise psychological health issues to file a preliminary plan for the presentation of evidence on those issues.[15] The Board characterized this requirement as

> an invitation to petitioners affording them an early opportunity to convince the Board and the Commission that the psychological issues are suitable for adjudication.[16]

During the proceedings before the Commission, no party challenged the procedural sufficiency of PANE's contentions. Moreover, upon review of PANE's contentions and its plan for presentation of evidence, the Licensing Board found that

> [t]he intervenors have, in our view, established a sufficient prehearing basis for the premise that the [psychological] effects are measurable.[17]

On the basis of this conclusion and its analysis of NEPA, the Licensing Board recommended to the Commission that it consider psychological issues for the purpose of mitigating adverse psychological impacts.[18]

5. The Commission first considered PANE's contentions on December 5, 1980. At that time, the vote on whether to take evidence on the psychological health effects of restart was 2-2, with no substantive majority. Thus, the Commission denied PANE's contentions. Among the Commissioners' four separate opinions were three that acknowledged the authority of the Commission to examine psychological health impacts

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[15] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) (filed Sept. 24, 1979).

[16] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart)(Memorandum and Order on Motions to Modify)(filed Oct. 17, 1979).

[17] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), LBP-80-8, 11 N.R.C. 297, 302 n.8 1980 [hereinafter cited as *Board Certification* (J.A. 36 n.8).

[18] *Id.* at 309 (J.A. 47).

(Ahearne, Bradford and Gilinisky).[19] Commissioners Bradford and Gilinsky asserted that the Commission should exercise that authority, but neither reached the question of whether such an examination is compelled by NEPA. On September 17, 1981, after the appointment of a fifth commissioner, the Commission voted 3-2 to affirm the denial of PANE's contentions, although the fifth Commissioner did not issue an opinion or concur in any of the previous opinions.[20]

6. The court of appeals issued its opinions and amended judgment on May 14, 1982. (Pet. App. 1a-76a). Judge Wright and Judge McGowan, with Judge Wilkey dissenting, held that psychological health damage is cognizable under NEPA in the circumstances presented by PANE's allegations.[21] The court ordered the Commission to examine the available information concerning psychological health effects at Three Mile Island in order to determine whether those effects are significant. The court concluded that if the Commission finds a significant health impact, it must prepare an environmental impact statement on the proposed restart of TMI-1. (Pet. App. 25a-28a).[22]

The court's decision was based on the following principles: (1) the damage to individual health at Three Mile Island constitutes an environmental effect under NEPA (Pet. App. 10a); (2) human health includes human psychological health

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[19] *Commission Decision, supra* note 13, at 619-626 (Pet. App. 79a-81a, 91a-100a).

[20] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No.1), CLI-81-20, 14 N.R.C. 593 (1981)(Pet. App. 101a-102a).

[21] The court also held that the alleged psychological health damage is not cognizable under the Atomic Energy Act. No party has raised that issue here. Thus, the Commission's discussion of the Atomic Energy Act (NRC Br. at 48-49) has no bearing on this case.

[22] In its brief, the Commission misstates the holding as "requir[ing] consideration in the restart proceeding of petitioner's contentions respecting psychological stress." (NRC Br. at 12). *Amicus* Scientists and Engineers for Secure Energy ("SE_2") states that the court's holding violates *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519 (1978), by "requiring repeated (if not additional) procedures" of the Commission. SE_2 Br. at 7. This, too, is inaccurate. The court did not violate *Vermont Yankee*, or in any other way exceed the proper scope of judicial review. In ordering the Commission to determine whether the available information requires the preparation of an EIS, the court explicitly stated, "the Commission may choose the procedures by which it makes this determination." (Pet. App. 30a).

(Pet. App. 11a-12a); and (3) the health damage alleged at Three Mile Island is not comparable to mere anxieties and discomforts that have been held not to trigger NEPA consideration in other cases (Pet. App. 15a-16a). The court also held that the health damage alleged by PANE was sufficiently concrete to be considered (numerical quantification is not required), particularly in light of the Licensing Board's finding that PANE had made a sufficent pre-hearing showing of measurability (Pet. App. 14a).[23]

7. Since the court of appeals issued its opinions, two developments have occurred that may bear on the urgency of a decision by this Court. First, the estimate of the probable date for completion of repairs of the steam generator tubes in Unit 1 has continued to slip, from the end of 1982 (Utilities Petition at 6 n.8), to March or April 1983 by the latest public estimate. (Utilities Br. at 12 n.12). Second, on December 29, 1982, the Atomic Safety and Licensing Appeal Board ruled that it was not satisfied with the evidence with respect to a major reactor

[23] The court also ruled that the Commission's continuing responsibilities and actions with respect to TMI-1 in this particular circumstance require the Commission to determine whether new information now exists that would require the preparation of an environmental impact statement. (Pet. App. 18a-23a). Although petitioners have not raised the issue here, both they and *amicus* Atomic Industrial Forum complain that the court's language was broader than necessary for the decision because, they believe, it would require a new environmental analysis solely on the basis of new information, even if no new federal action were involved. (NRC Br. at 22 n.14, Utilities Br. at 13 n.14). These concerns appear unfounded. The decision below on whether this is a stage at which NEPA analysis may be required was based in part on two major Commission actions: (1) the Commission's finding that it lacked reasonable assurance of the safety of the reactor, and (2) the Commission's decision to hold an extensive public hearing comparable to an original licensing proceeding to determine whether restart should be allowed. (Pet. App. 20a-21a). Moreover, we agree with Judge Wilkey and all of the parties and *amici* who addressed the issue that the proposed restart of TMI-1 is itself a major federal action for which a NEPA evaluation would be required if all other statutory tests were met. (*See, e.g.*, NRC Br. at 22 n.14, Utilities Br. at 13 n.14, AIF Br. at 17). Although PANE would not object to a clarification that the restart itself is a proposed major federal action within the meaning of NEPA, a ruling on the issues raised by the Atomic Industrial Forum would make no practical difference in this case.

safety system.[24] As a result, the Appeal Board reopened the TMI-1 restart hearing. The current schedule provides for completion of the evidentiary hearing and filing of subsequent briefs by March 28, 1983. No indication has been given of the timing of the Appeal Board's decision or of its possible impact on the timing of a Commission decision on whether to authorize restart of TMI-1.

8. The sole issue before this Court is a legal question based on the factual allegations in PANE's first contention before the Licensing Board (Pet. App. 115a).[25] PANE has had no opportunity to address before the Commission any of the many factual arguments that appear in the briefs of the petitioners and their *amici.* [26] The decision by the Court below was a conclusion of law, properly assuming the truth of PANE's factual allegations. Accordingly, petitioners' arguments that have factual premises inconsistent with PANE's allegations or the Board's threshold ruling on measurability are not properly before this Court.[27]

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[24] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289, ALAB-708 (Design Issues) (Memorandum and Order)(filed Dec. 29, 1982).

[25] This case does not raise at least two other issues that are argued by *amicus* SE_2. First, there is no question of judicial infringement on the procedures adopted by the Commission under either the Administrative Procedure Act or NEPA. As we have noted, *supra* note 22, the court explicitly left procedural matters to the Commission. Second, there is no question of the sufficiency of PANE's participation in the restart proceeding. Neither the parties, the Licensing Board, nor the Commission has ever challenged PANE on those grounds. Because none of these issues has previously been raised, they cannot be raised here.

[26] The sole exception is the pre-hearing threshold issue of measurability of the alleged health damage, on which the Licensing Board ruled for PANE. *See supra* page 6, text accompanying note 17.

[27] The Commission argues that PANE now seeks to inject a new factual issue into the case: that the alleged psychological health damage is related to the potential impact of a possible reactor accident on the natural and physical environment. (NRC Br. at 43 n.29). But this interrelationship between the health of residents and the potential for nuclear accidents was the core of PANE's first contention: "Operation of Unit 1 would be a constant reminder

(footnote continues)

SUMMARY OF ARGUMENT

This case involves damage to human psychological health as a result of a federal action affecting the human environment surrounding Three Mile Island. PANE's first contention, which must be accepted as true for the purpose of this decision, alleges that: (1) the accident at Three Mile Island Unit No. 2 impaired the psychological health of residents of the area surrounding Three Mile Island; (2) the manifestations of that psychological health damage are similar to those recognized in the aftermath of other disasters; (3) the accident at Unit No. 2 sensitized area residents such that the restart of Unit No. 1 would revive the original trauma, cause further trauma, and make recovery impossible in that environment; and (4) the possibility of another accident at TMI-1 is a central cause of the health damage that will result from restart.

I.A. As this Court has recognized, the potential for harm to human health triggers the application of NEPA when all other statutory requirements are met. Indeed, the language of NEPA establishes that protection of human health is a central and primary goal of the statute. The legislative history confirms this point, as do the regulations of the Council on Environmental Quality.

I.B. This Court has previously held, with respect to other statutes, that the term "health" encompasses psychological

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(footnote continues)

of the terror which [PANE's members] felt during the accident, and of the possibility that it will happen again." (Pet. App. 115a)(emphasis added). PANE's contention alleges that both the restart itself and the potential for an accident with massive harm to the natural and physical environment will cause the psychological health damage. The court of appeals properly accepted PANE's allegation as true for the purpose of making a legal ruling. The Commission must do the same here unless it wishes to interrupt this Court's review of the legal issues to institute an administrative proceeding to determine the proximate cause of the alleged health damage.

The Commission is also in error in suggesting that the court of appeals left it with no discretion to reject our contentions on the basis of proper factual findings. On the remand ordered by the court below, the Commission could decide, based on the record before it, that the psychological harm was so remote, speculative, or unquantifiable as to be immaterial in any sort of agency decision.

health. The legislative history demonstrates that Congress intended NEPA to apply to situations in which federal actions affecting the environment threaten harm to human psychological health. The only court other than the court below that has ruled on the psychological effects of federal action held that such effects must be considered in an environmental impact statement by the responsible federal agency.

The fact that fear may be an intervening link in the causal chain between the environment created by restart and the health damage alleged by PANE does not render NEPA inapplicable. NEPA encompasses both direct and indirect effects of federal actions. The health damage here is an indirect effect of the environmental change; as such, it is cognizable under NEPA. PANE seeks an evaluation, through accepted scientific methods, of the foreseeable health effects that will be caused by the environment created by the restart of TMI-1.

I.C.1. Section 102(2)(C) of NEPA requires that a federal agency undertake an environmental analysis if its action is likely "significantly [to] affect[] the quality of the human environment." The legislative history of NEPA reflects throughout that Congress intended to prevent areas of the nation, which are themselves natural and physical resources, from being lost to human use or becoming threatening to human health and well-being. That is what will happen in the area surrounding Three Mile Island if restart is allowed.

As PANE has alleged, a significant number of people will not be able to live in the environment at Three Mile Island without suffering harm to their health. For them, an area of the nation will have become hazardous, and they may have to leave to protect their own well-being. That degradation and effective loss of the use of the human environment is exactly what NEPA is intended to prevent.

The relevant case law supports the interpretation of "environment" under NEPA as extending to the human surroundings. Agencies have been required to analyze effects such as emotional isolation and increase in crime that might result from their actions affecting the nature of the human environment in a particular area. Similarly, here, the question is the

nature of the environment that would be created by the restart of TMI-1.

Petitioners propose that NEPA's application be limited to effects on what they term the "physical and natural environment." Their attempt to apply that limitation here, however, is not supported by the legislative history, the CEQ regulations, or the case law. In any event, this case meets petitioners' test because the restart of TMI-1 will cause the natural and physical surroundings at Three Mile Island to threaten human health.

I.C.2. Under PANE's contention, the potential for a future accident at TMI-1 accompanied by significant physical harm is a major source of the psychological health damage that PANE alleges would be caused by the restart of TMI-1. It is significant, in this regard, that the President's Commission has recognized that we must not assume that an accident equal to or worse than TMI-2 cannot happen again. More important, as a result of the TMI-2 accident, the Commission itself has ordered that environmental impact statements for reactor licenses include consideration of catastrophic nuclear accidents involving releases of radioactivity from the reactor. Thus, the Commission is in the extraordinary position of ordering that the remote physical effects of an accident be considered under NEPA, while arguing that the immediate health effects of restart should be ignored. This attempt to create a dichotomy among the kinds of health consequences that may arise from an environmentally related federal action is contrary to the goals and purposes of NEPA. Moreover, it contravenes the principle that agencies must consider the reasonably forseeable effects of their actions affecting the environment.

I.C.3. The measurability of the health damage alleged by PANE is a question of fact. The resolution of such questions is entrusted to administrative agencies, subject to limited judicial review. In this case, the Licensing Board has already held that PANE established "a sufficient prehearing basis for the premise that the effects are measurable." This procedural, threshold decision must stand, absent a finding that it is arbitrary. No such showing has been attempted by any party.

Moreover, NEPA does not require the precise measurability sought by petitioners. The point of the statute is to assure that federal agencies take into account the available information relevant to the environmental effects of their actions. Agencies need not predict those effects with precision. Rather, they are required only to make a reasonable effort to forecast the effects in light of the available information.

II. In arguing that the decision below would be broadly applied and pose an undue burden on the Commission and other federal agencies, petitioners ignore the explicit limitations of NEPA and the extremely broad range of agency discretion under the statute.

II.A. The decision below relates to the effects of restart on people in the area surrounding Three Mile Island. There is nothing in the decision to suggest that the health effect alone would have been held cognizable under NEPA independent of its relationship to the particular environment at Three Mile Island.

Section 102(2)(C) establishes the two explicit limiting principles of NEPA. First, there must be an effect on the quality of the human environment. This test prevents the broad application of NEPA to non-environmentally related actions of other federal agencies. Second, the effect must be significant. As an issue of law, this test serves initially to screen out effects that are not significant in terms of the goals and purposes of NEPA.

II.B. A narrow, highly deferential standard of judical review governs every stage of Commission compliance with NEPA. A decision not to prepare an EIS will be upheld if it is reasonable. Similarily, the EIS itself, if one is prepared, will be upheld if it is reasonable. The decision below does not require the Commission to use any particular procedures in fulfilling either of these responsibilities. The rulings of this Court confirm that the Commission's ultimate decision concerning the proposed restart of TMI-1 is entitled to substantial deference as long as NEPA's procedural requirements have been met.

II.C. As written, the decision below applies narrowly to situations in which there is a previously traumatized population,

as there is here. Moreover, the Commission and other agencies have broad discretion to establish threshold procedural requirements that must be met before they will consider an issue under NEPA. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519 (1978). Thus, agencies have the means to prevent consideration of frivolous claims. In this case, the Commission's Licensing Board found that PANE had met the threshold test that the Board employed.

Finally, even if the Commission were required to consider psychological health damage with respect to all reactor licensing decisions, the burden would be minimal. The Commission has the full authority to undertake the consideration through a generic rulemaking proceeding, subject only to the procedural requirements discussed by this Court in *Vermont Yankee*. The outcome of the proceeding would apply to all licensing decisions and would be entitled to substantial deference.

ARGUMENT

PANE's first contention establishes the factual basis for this Court's review. Absent any showing that the allegations are a "sham and raise[ ] no genuine issue of fact," they must be assumed as true for the purpose of this decision. *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 689-90 & n.15 (1973). No such showing or other proper challenge to PANE's contention has been attempted.

The contention contains the following essential elements:[28]

1) The accident at Unit 2 impaired the psychological health of surrounding residents, as evidenced in part by physical symptoms.

2) The manifestations of psychological health damage at Three Mile Island are similar to those recognized in the aftermath of other disasters.

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[28] The full text of the contention is reproduced in Appendix B to this brief.

3) The psychological health damage caused by the accident at Unit 2 has sensitized its victims such that restart of Unit 1 would revive the original trauma, cause further trauma, and make recovery impossible in the TMI area.

4) The possibility that another nuclear accident could happen at Unit 1 is central to the psychological health damage that would be caused by the restart.

The question before the Court is whether the restart of TMI-1, which will cause the local environment to threaten human health, affects "the quality of the human environment" under section 102(2)(C) of NEPA, 42 U.S.C. § 4332(C)(2). The issue is one of first impression in this Court.

I. Section 102(2)(C) of NEPA Requires the Commission to Evaluate and Consider the Psychological Health Damage that PANE Has Alleged Will Be Caused by the Restart of TMI-1.

A. Protection of human health is the primary concern of NEPA.

In *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 539 (1978), this Court recognized the significance of potential human health impacts under NEPA. Indeed the protection of human health is by far the most important goal of the statute. As Judge Wilkey acknowledged in his dissent below,

> [t]here is no question that NEPA's requirements extend to effects on human health.

(Pet. App. 35a).

Section 2 of NEPA, 42 U.S.C. § 4321, provides that one of the purposes of the statute is to "stimulate the *health* and welfare of man" (emphasis added).[29] Section 101(b) expresses the intent to

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[29] The Commission is correct (NRC Br. at 35) that Congress chose this language carefully. It is health damage caused by or involved in the relationship between humans and the environment that is of concern under

(footnote continued)

> (2) assure for all Americans safe, *healthful*, productive, and esthetically and culturally pleasing surroundings;

and to

> (3) attain the widest range of beneficial uses of the environment without degradation, risk to *health* or safety, or other undesirable and unintended consequences.

42 U.S.C. § 4331(b) (emphases added). Section 101(c) also demonstrates Congress' central and primary concern with human health:

> (c) The Congress recognizes that each person should enjoy a *healthful environment* . . . .

42 U.S.C. § 4331(c) (emphasis added).

The legislative history affirms the fundamental underlying concern for human health. This concern was apparent throughout Senator Jackson's remarks during the hearings and debates:

> A national policy for the environment is thus above all else a national policy for the welfare and survival of man.[30]

> What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the *health* of mankind.[31]

(footnote continued)

NEPA. As we demonstrate below in I.C.1. & 2., that is precisely the situation here. Moreover, contrary to the Commission's basic argument, the decision below is consistent with this premise. That decision was not reached in a vacuum, but in the context of harm to a particular population in a specific geographical environment. The health damage relates only to that environment and to no other. It distorts the decision to suggest that it applies to all federal actions with any sort of impact on human health, regardless of the relationship to the human environment.

[30] 115 Cong. Rec. 3702 (1969).

[31] 115 Cong. Rec. 19,009 (1969) (emphasis added).

See also remarks of Senator Jackson during the Senate debates, *infra* at 18-19, 25. In light of this congressional concern, "[no] subject to be covered in an EIS can be more important than the potential effects of a federal program upon the health of human beings." *Citizens Against Toxic Sprays, Inc. v. Bergland,* 428 F. Supp. 908, 927 (D. Or. 1977).

The fundamental importance of human health under NEPA is also reflected in the implementing regulations of the Council on Environmental Quality ("CEQ"). Section 1508.8(b) explicitly includes effects on health among the effects that must be considered under NEPA. 40 C.F.R. § 1508.8(b) (1982). Section 1508.27(b) identifies the concerns that must be taken into account in determining whether an effect is "significant" under section 102(2)(C) of NEPA. 40 C.F.R. § 1508.27(b) (1982). Under section 1508.27(b)(2), CEQ expressly identified impacts on human health as the first to be considered in determining whether an environmental impact statement must be prepared.

B. NEPA's protection of human health encompasses human psychological health.

Although the Utilities are correct in stating that NEPA does not, on its face, refer specifically to psychological health (Utilities Br. at 19), the statute's repeated general references to human health do not distinguish among the myriad causes of health damage. This Court has long held that the statutory term "health" includes psychological health in the absence of specific indication to the contrary. In *United States v. Vuitch,* 402 U.S. 62 (1971), the Court held that the word "health" in the statute in question should be read according to its dictionary definition as "the state of being sound in body or *mind.*" The Court concluded that

> this construction accords with the general usage and modern understanding of the word "*health,*" which *includes psychological as well as physical well being.*

Id. at 72 (emphases added).[32]

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[32] *Accord, Doe v. Bolton,* 410 U.S. 179, 192 (1973) (health includes emotional and psychological factors). *See also Diamond v. Chakrabarty,* 447

(footnote continues)

The legislative history specifically documents Congress' awareness of and concern for human psychological health when it enacted the statute. Both Senator Jackson and the Senate Committee took notice of the

> crowding, congestion, and conditions within our central cities which result in civil unrest and detract from man's social and *psychological well-being.* [33]

(footnote continued)

U.S. 303, 308 (1980) (quoting *Perrin v. United States,* 444 U.S. 37, 42 (1979) (statutory terms to be interpreted according to their "ordinary contemporary, common meaning").

The Utilities argue, without authority, that Congress always makes specific reference to psychological health when it intends the subject to be covered (Utilities Br. at 19 n.15). But this was not true of the statutes construed in *United States v. Vuitch* and *Doe v. Bolton,* and it is not true of another widely applicable statute, the Internal Revenue Code. *Compare* I.R.C. § 105(a) (1967) (amounts received by an employee under a "health plan" includable in gross income) *with* Treas. Reg. § 7.105-2(d) (1982) (indicating in Example 9 that "health" encompasses mental health). Also, *compare* I.R.C. § 213 (1978) (allowing deductions for medical expenses) *with* Treas. Reg. § 1.213-1(e)(1)(ii) (1982) (including costs related to mental defect or illness among deductable expenses). Only "a very palpable restriction in the legislative history" of a statute would permit the Utilities' strained reading of the common meaning of the term. *New Hampshire v. Atomic Energy Comm'n,* 406 F.2d 170, 173-74 (1st Cir.), *cert. denied,* 395 U.S. 962 (1969), *cited at* Pet. App. 62a. No such restriction appears anywhere in the legislative history of NEPA.

[33] 115 Cong. Rec. 29, 067 (1969); S. Rep. No. 296, 91st Cong., 1st Sess. 4 (1969); [hereinafter cited as S. Rep.]. The Commission argues that each of the environmental problems discussed in this passage "is rooted in a discernable impact upon the natural or physical environment" (NRC Br. at 34), such that the physical impact, but not the resulting psychological damage, should be considered under NEPA. The Utilities make a similar argument. (Utilities Br. at 22 n.17). But faltering and poorly designed transportation systems and architectural ugliness, also referred to in this passage, are hardly comparable to the sort of direct damage to a physical object or by a physical actor that is sought by the Commission as a limiting principle, yet they were unquestionably "environmental quality problems" in the eyes of Congress. S. Rep. at 4. Similarly, crowding and congestion may not be caused by actual physical impacts, yet they, too, are within the contemplation of Congress. *Id.*

In any event, as we discuss below, this case involves an effect on the quality of the human environment, even if termed the "physical or natural environment." *See* discussion at pages 25, 30-32, *infra.*

(Emphasis added). Indeed, Senator Jackson opened the Senate debate on NEPA by referring to the purpose of the statute as follows:

> to . . . insure that present and future generations of Americans will be able to live in and enjoy an environment free of *hazards to mental and physical well being.*

115 Cong. Rec. 3698 (1969) (emphasis added). The seminal report on which Senator Jackson and the Senate Committee relied includes "psychological discomfort," *id.* at 3704, and "psychophysical stress," *id.* at 3703, among the costs of federal effects on the human environment. The same report specifically recommended behavioral scientists, which includes psychologists, as sources for information and guidance critical to the implementation of NEPA. *Id.* In section 102(2)(A), Congress embraced precisely that recommendation by directing that agencies "insure the integrated use of the natural and social sciences . . . in planning and in decisionmaking which may have an impact on man's environment." 42 U.S.C. § 4332(2)(A).

The only court that has actually ruled on an issue involving psychological considerations held that such impacts must be addressed when an EIS is prepared. In *Chelsea Neighborhood Associations v. United States Postal Service,* 516 F.2d 378 (2d Cir. 1975), the Second Circuit emphasized the need to consider what must be termed the "psychological effects" of a plan to construct a housing project on top of a postal facility. The court directed the Postal Service to examine "the effect [of] living at the top of an 80-foot plateau," involving "emotional as well as physical isolation from the community." In the court's words, the agency was required to consider whether its project might become a "human jungle" as a result of these psychological considerations. *Id.* at 388.

The argument for consideration of psychological factors here is far stronger than in *Chelsea* because this case rests upon an allegation of severe damage to human health. As a matter

of law, all environmentally related health damage, whether physical or psychological, is a central concern of NEPA.[34]

Congress did not distinguish among the immediate causes of health damage cognizable under NEPA. The statute requires only that there be a significant effect on the quality of the human environment. 42 U.S.C. § 4332(2)(C). The CEQ regulations make it clear that health damage is cognizable as an "indirect effect" of federal actions affecting the quality of the human environment. 40 C.F.R. § 1508.8(b) (1982).

Contrary to this principle, the Commission and the Utilities attempt to separate out "fears" and "perceptions" as the causes of the psychological health damage and to contrive an argument that environmental change is somehow not responsible for the health damage that restart would create. They also assert that PANE seeks an evaluation of "fears" or "perceptions" themselves, rather than health damage. (NRC Br. at 26, 41, 43; Utilities Br. at 18, 24, 31).[35]

But PANE does not seek an evaluation of fears or perceptions. They are material only as an immediate causal link between the alteration of the human environment at TMI and the resulting health damage. NEPA requires an analysis of the

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[34] The Utilities appear to argue that psychological health damage is not cognizable under NEPA because it, like natural beauty, is a mere byproduct of improving the physical environment. (Utilities Br. at 22). But the same is true of physical health damage. Protection from the physical health damage of cancer is merely a byproduct of assuring against excessive radiation exposure. Yet there is no doubt that the Commission must consider the likely incidence of cancer from a proposed nuclear facility. Similarly, where psychological health damage is involved, the Commission must consider the incidence of that damage in evaluating the proposed action.

[35] The Commission also argues (NRC Br. at 47-48) that this psychological health damage cannot be considered under NEPA because it is not susceptible to mitigation. This is a question of fact. PANE believes that preventing restart is the best means of mitigating the damage. However, less drastic measures, such as a very cautious and gradual increase to full power or a limitation on the force of the chain reaction, perhaps coupled with other measures, may serve to mitigate the damage to some degree. *Amicus* American Psychological Association describes other possibilities. All of these are factual questions appropriate for resolution by the Commission.

environmentally generated health effects of federal action; as long as the health damage is related to the environment, NEPA applies regardless of any specific intervening causal relationship.[36]

In the case of the afflicted, post-traumatic population at Three Mile Island, PANE has alleged and offered to prove that the initial fear reaction caused by the change in the surrounding environment will produce severe health damage. In some cases, this sort of health damage leads to incapacitation or suicidal tendencies.[37] PANE seeks an evaluation of that health damage through accepted medical and scientific methods.[38]

There is nothing in NEPA to suggest that such health damage directly related to an alteration in the environment is not to be considered. Thus, the question cannot be simply whether fear or some other psychological condition is involved in the causal chain, but whether there is an environmental cause for the health damage. We now turn to that issue.

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[36] The Council on Environmental Quality has confirmed that psychological health damage must be considered under NEPA despite the fact that human emotions are part of the causal chain between the federal action with respect to the environment and the resulting health damage. In a letter dated February 14, 1980, counsel for CEQ responded to a PANE member's inquiry concerning "psychological feelings," stating, "For the purposes of NEPA, 'effects on the human environment' include the full range of potential health effects on human beings." This letter was only recently provided to PANE's counsel. It is reproduced as Appendix C to this brief.

[37] American Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 237 (3d ed. 1980) [hereinafter cited as *DSM-III*].

[38] Thus, PANE does not seek to have the Commission take into account "public disagreement" with restart (NRC Br. at 41) or "the views of the population itself," (Pet. App. 37a-38a, Wilkey, J., dissenting). These are political views on an issue that Judge Wilkey correctly emphasizes has already been determined by Congress. *Id.* The issue here is not one of politics, but one of the tangible health impact of restart of TMI-1 on the immediately surrounding residents.

For the same reason, the evaluation sought by PANE would not, contrary to the Utilities' assertion (Utilities Br. at 33), result in "irrational decision making." Rather, by bringing the best available scientific information to bear on the Commission's ultimate decision, it would improve the rationality of the decision. *See* discussion, *infra* at 36 note 63.

C. The Commission must consider the environmentally related health damage that will be caused by the restart of TMI-1.

1. The restart of TMI-1 will create an environment that damages human health.

Section 102(2)(C) of NEPA, 42 U.S.C. § 4332(2)(C) (1976), governs the circumstances under which federal agencies must evaluate the alleged impacts of their proposed actions. It requires that federal agencies prepare an environmental impact statement ("EIS") with respect to any proposed major federal action "significantly affecting the quality of the human environment."[39] This Court recognized in *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 539, that the potential for environmentally caused human health damage triggers the application of NEPA. Therefore, the psychological health damage that PANE alleges here must be considered by the Commission if it arises from the effect of the restart of TMI-1 upon the quality of the human environment.[40]

The most significant goals of NEPA are "to encourage productive and enjoyable harmony between man and his

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[39] The issue here is solely whether the alleged psychological health damage involves an effect on the human environment as a matter of law. If it is, then the agency must determine whether the effect is significant as a matter of fact, such that an environmental impact statement is required. This agency determination is the "environmental assessment" now embodied in the CEQ regulations, 40 C.F.R. §§ 1501.4(b) and (c), and 1508.9 (1982). The factual question of whether the alleged health damage is significant, and thus, whether an environmental impact statement is required, is not before the Court.

[40] The Commission appears to distinguish between an "environmental impact," as the term is used section 102(2)(C)(i), and an impact on the quality of the "human environment" in section 102(2)(C). (NRC Br. at 24). We can discern no such distinction. If the "human environment" differs from the "environment," federal officals could be required to prepared detailed statements on alternatives to their proposed actions (§ 102(2)(C)(iii)), although the actions themselves did not involve "environmental impacts." Clearly, this is not what Congress intended, and the Commission has cited no authority for this proposition. It may be that the Commission, in this passage, is simply emphasizing that a federal impact on human health is not cognizable under NEPA unless the impact relates to the surrounding environment. If so, the question is what constitutes the surrounding environment, which we discuss here.

environment," and to "stimulate the health and welfare of man." 42 U.S.C. § 4321 (1976)(emphasis added). The statutory term "human environment" is defined by the Council on Environmental Quality as follows:

> "Human Environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.[41]

As this Court has held, CEQ's interpretation of NEPA is entitled to substantial deference. *Andrus v. Sierra Club,* 442 U.S. 347, 358 (1979).

The psychological health damage to people at Three Mile Island would be caused directly by a change in their environment. Whereas they now live in an environment free from the potential for a nuclear accident, when restart occurs they will live in an entirely different environment, with renewed potential for a nuclear accident and further exposure to radiation. The alleged health damage to the surrounding population will flow directly from the risk of accident that will arise if the reactor is restarted.[42] That change in the human environment is the *sine qua non* of the danger to human health, without which the damage would not occur.

It is precisely the relationship between human beings and their environment (40 C.F.R. § 1508.14 (1982)) that will cause

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[41] 40 C.F.R. § 1508.14 (1982). CEQ added the following proviso:

> This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

[42] The Commission suggests (NRC Br. at 29) that this cases involves stress alleged to arise from the mere existence of TMI-1, regardless of whether the reactor is in operation or poses the threat of radiation exposure. This is simply incorrect. PANE's contention encompasses the fact that renewed operation of TMI-1 raises the possibility that another accident will occur. Appendix B, *infra.* This potential cannot be divorced from reactor operation. The Commission has recently acknowledged that the accident risk is significant enough to require the consideration of the consequences of catastrophic accidents in environmental impact statements prepared since the TMI-2 accident. 45 Fed. Reg. 40,101 (1980). *See* discussion below at 32.

damage to human health when TMI-1 is restarted. As PANE has alleged, a significant number of people who live in the area will suffer psychological health damage, as real and as environmentally related as any human illness caused by the presence of chemicals, microbes, or other pollutants present in the human surroundings. They will not be able to live in the environment at Three Mile Island without suffering that health damage. As we explained in our opposition to the petitions for writs of *certiorari*, they could alleviate the harm by moving away from that environment (Br. in Opposition to Petitions at 53-54 n.45). There can be no more compelling evidence to prove that their health damage is caused by their surrounding environment.[43]

The Second Circuit's decision in *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), reflects the clearest recognition that NEPA's concept of the environment involves this relationship between people and their surroundings. There, the court addressed the effects on prospective residents of the construction of a proposed apartment building above a vehicle maintenance facility. The court held that NEPA required analysis of the effects on people of the quality and character of the environment that would be created by completion of the project according to the design. Just as NEPA required consideration of the relationship between people and their environment in *Chelsea*, so it requires consideration of the psychological health damage that would result from the alteration of the environment at Three Mile Island by the restart of TMI-1.

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[43] The Commission has attempted to respond to this point by arguing that the same could be said of any federal action that affects people in any manner and that NEPA is not limited to localized phenomena. They are in error on the first point. Not all federal actions, indeed very few, have the potential to harm human health. They are, of course, correct on the second point, that NEPA is not limited to localized phenomena. But that proves nothing here. The Commission would hardly argue that NEPA applies only to nationwide phenomena and that agencies need not consider damage to the quality of the human environment in a particular area. The fact that people could move away from TMI serves only to define the affected area, not to limit the application of NEPA to that or any other locality.

The legislative history confirms that this degradation of health through alteration of the surroundings in which people live is precisely the type of environmental harm NEPA was intended to address. As Senator Jackson emphasized when he introduced S. 1075, which became NEPA,

> The purpose of this legislation is to . . . insure that present and future generations of Americans will be able to live in and enjoy *an environment free of hazards to mental and physical well being.*

115 Cong. Rec. 3698 (1969) (emphasis added). In the words of the Senate Report,

> The expression "environmental quality" symbolizes the complex and interrelated aspects of man's dependence upon his environment.

S. Rep., *supra* note 33, at 16. We must, therefore, husband those aspects of our environment "—air, water, soil, and living space—[for which] technology at present provides no substitutes." *Id.*

As Senator Jackson emphasized, the purpose of NEPA is to address the "problems involving the quality of our surroundings and man's relationship to the environment," 115 Cong. Rec. 3699 (1969), in order to maintain "the integrity and viability of the environment." *Id.* at 3700.[44]

Petitioners cite legislative history discussing human dependence on the environment and its "life support systems" for the proposition that NEPA encompasses only impacts upon or propagated through the "physical or natural environment." (NRC Br. at 32-33; Utilities Br. at 22-23). The health effects at issue here meet that test. The geographic area surrounding Three Mile Island is a "physical and natural environment." As PANE alleges, if TMI-1 is reactivated the surrounding physical and natural environment will become harmful to human health.

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[44] Similarly, one of the seminal sources on which NEPA was based, a special report to the Senate Committee on Interior and Insular Affairs, identified as a major goal of the statute "[t]o restore and revitalize damaged areas of our Nation. . . ." 115 Cong. Rec. 3702 (1969) (remarks of Senator Jackson).

The "physical or natural environment" analysis proposed by petitioners is, in any event, an unproductive tautology. Everything in our environment is physical or natural. Thus, the modifiers do not exclude anything from consideration under section 102(2)(C). Virtually any esthetic concern, for example, meets the test, since it involves physical objects, whether landscaping for a new federal facility, or perhaps even the color of paint on a wall. *See, e.g., Maryland-National Capital Park and Planning Commission v. United States Postal Service,* 487 F.2d 1029, 1038 (D.C. Cir. 1973).

This contrived distinction is without support in either the statute or the legislative history. The word "physical" does not appear in the statute at all, and the term "natural environment" appears only once, and then in a section that otherwise emphasizes the broad reach of the statute. And none of the legislative history, including that cited by petitioners, is language of limitation. The assertion that Congress was concerned with physical harm belabors the obvious. As we have demonstrated, *supra* at 25 & note 44, Congress repeatedly expressed its concern with the effects of all aspects of human surroundings on health and well-being.[45]

Thus, the question is not only whether some pollutant is discharged, whether some particular object is affected, or whether the direct impact on people is through some physical variable, but whether the surroundings threaten human health and well-being.[46] If TMI-1 is restarted, an area of the nation will become harmful to the health of its inhabitants. Therefore, an environmental analysis is required before the facility may be operated. If NEPA is to be interpreted in light of the statutory purposes discussed above, as it must be, *Philbrook v. Glodgett,*

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[45] As we argue below at 37-40, the explicit statutory limiting principles are (1) the requirement for an effect on "the quality of the human environment," and (2) the requirement that the effect be significant.

[46] It is noteworthy that this concept of the "environment" as encompassing all aspects of the surroundings rather than particular physical objects, is the same as that in the dictionary definition of the term:

> Environment . . . .
>
> [2] . . . That which environs; the objects or the region surrounding anything.

2 Oxford English Dictionary 231 (1933).

421 U.S. 707, 713 (1975), the restart of TMI-1 must be considered to involve an effect on the quality of the human environment.

Although the issue is one of first impression in this Court, *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), and analogous cases in the lower courts support this conclusion.[47] In *Hanly v. Mitchell*, 460 F.2d 640 (2d Cir. 1972) (*Hanly I*), *cert. denied*, 409 U.S. 990 (1972), the Second Circuit ruled that NEPA's protection of "the quality of life" for city residents extended beyond sewage, garbage, and air and water pollution to noise, demonstrations, the potential for disturbances at a proposed jail, and the potential danger from the operation of an out-patient clinic at the jail. *Id.* at 647. As a result, the court directed the General Services Administration ("GSA") to reconsider its decision that the project did not involve a significant impact on the quality of the human environment. *Id.* at 648-49.

The Second Circuit reviewed the matter again in *Hanly v. Kleindienst*, 471 F.2d 471 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)(*Hanly II*), in which it again held the GSA's determination of no significant environmental impact to be inadequate. The court remanded to the agency for the purpose of determining whether the jail and its attendant programs involved a substantially increased risk of crime in the area. It held that if the project were likely to cause an increased risk of crime, that "might tip the scales in favor of a mandatory detailed impact statement." *Id.* at 834. The Seventh Circuit adopted the same principle in *dicta* in *First National Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973). It did not need to reach the issue, however, because the district court had held, after reviewing the facts, that there would be no significant increase in crime created by the construction of a jail in that case. *Id.* at 1376.[48]

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[47] Many of these cases ultimately restrict the application of NEPA on the particular circumstances involved precisely because they did not involve the sort of health damage or other impact that is at the core of NEPA's concerns.

[48] The Seventh Circuit also left open the question of whether "public sensibilities" related to the proposed jail would be cognizable under NEPA if they were accompanied by a showing that the danger of crime would rise if the jail were built. *Id.*

In these cases, the courts recognized that an environmental analysis is required where the effect of a federal action on the human surroundings had the potential for causing serious harm to human well-being. It is significant that the *Hanly II* court viewed the danger of crime itself as an environmental effect that could trigger the requirement to prepare an environmental impact statement. The court reached this result although the physical impacts related to jail construction were not significant enough to trigger the EIS requirement, and although those physical construction impacts were not themselves related to the degree of potential increase in crime. *Hanly II*, 471 F.2d at 834.[49]

In terms of section 102(2)(C) of NEPA, these courts recognized that the potential for increased crime would be caused by a change in the quality of the surrounding human environment, such that an environmental analysis would be required. That principle governs here. The Commission must consider the psychological health damage that would result from the change that restart will cause in the human environment at Three Mile Island.[50]

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[49] Thus, these cases are in direct conflict with the petitioners' assertion that NEPA requires an impact upon or propagation through some particular natural or physical aspect of the environment. (NRC Br. at 27, Utilities Br. at 21-24). Only the action of the criminals lured or released into the area by virtue of the changed nature of the environment would cause the threat to human beings through an increase in crime. The physical impacts of construction would not "propagate" the threat of crime, yet NEPA applies to the change in the local environment. *See also Trinity Episcopal School Corp. v. Romney*, 523 F.2d 88, 93 (2d Cir. 1975)(urban environment encompasses such non-physical aspects of the human-environment relationship as "density, . . . quality of the built environment, . . . decay and blight, . . . [and] neighborhood stability").

[50] Petitioners rely on these two cases, as well as *Maryland-National Capital Parks and Planning Comm'n*, 487 F.2d 1029 (D.C. Cir. 1973); *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); and *Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980), all of which involved the introduction of low income people into an area through public housing, a job training center, and a facility using unskilled labor. The potential effect of those people on the community was rejected as a NEPA consideration on "overriding national polic[y]" grounds. *Board Certification*, 11 N.R.C. at 303 (J.A. 38). *See, e.g., Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d at 231.

(footnote continues)

Petitioners rely heavily upon a line of cases holding that various socioeconomic impacts of federal actions, particularly the loss of jobs at military installations, cannot trigger the preparation of an environmental impact statement because they do not involve a "primary impact" upon the physical environment.[51] None of these cases presents a fact situation at all similar to that now before the Court. Furthermore, as we have shown the "physical or natural environment" theory on which they are based does not preclude consideration of the human health damage alleged here. In fact, most of these cases explicitly support the proposition that the concept of the environment embodied in NEPA is not limited to physical or natural aspects of the human surroundings. *See, e.g., Breckinridge v. Rumsfeld,* 537 F.2d 864, 865-66 (6th Cir. 1976), *cert. denied,* 429 U.S. 1061 (1977) (NEPA application beyond the "physical environment" not in dispute).

More important to this analysis, none of these cases involves a federal action that would fundamentally change the physical reality of the surrounding environment. They involve strictly economic impacts and the loss of job opportunities. In each case, the physical reality of the area remains the same, and the jobs and economic circumstances could be revived with no

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(footnote continued)

polic[y]" grounds. *Board Certification,* 11 N.R.C. at 303 (J.A. 38). *See, e.g., Nucleus of Chicago Homeowners Ass'n v. Lynn,* 524 F.2d at 231.

Moreover, none of those cases involved effects on human health, or any other effects central to the purpose and goals of NEPA. Rather, they involved social interactions among people, a matter which does not appear anywhere as a central concern of Congress under the statute.

[51] *Breckinridge v. Rumsfeld,* 537 F.2d 864 (6th Cir. 1976), *cert. denied,* 429 U.S. 1061 (1977); *Image of Greater San Antonio, Texas v. Brown,* 570 F.2d 517 (5th Cir. 1978); *National Ass'n of Gov't Employees v. Rumsfeld,* 413 F. Supp. 1224 (D.D.C. 1976), *aff'd,* 556 F.2d 76 (1977); *Metlakatla Indian Community v. Adams,* 427 F. Supp. 871 (D.D.C. 1977). In addition to military base closings, this line of decisions involves the economic impacts of highway construction, *Citizens Comm. Against Interstate Route 675 v. Lewis,* 542 F. Supp. 496 (S.D. Ohio 1982); a proposal to use existing structures for a job training center, *Como-Falcon Coalition, Inc. v. United States Dep't of Labor,* 609 F.2d 342 (8th Cir. 1979), *cert. denied,* 446 U.S. 936 (1980); and the possible displacement of artists from a building in downtown San Francisco, *Goodman Group, Inc. v. Dishroom,* 679 F.2d 182 (9th Cir. 1982).

change in the surrounding physical reality.[52] Moreover, those cases do not involve damage to human health, which is at the heart of NEPA. By contrast, at Three Mile Island the change in the nature and human health effect of the environment is embodied in the operation of a nuclear reactor, with the attendant risk of a nuclear accident.

2. The human psychological health damage that will be caused at Three Mile Island is directly related to harm to the physical and natural environment.

From the beginning of this case, there has never been any question that the potential for harm from the physical effects of a nuclear accident is the source of the psychological health damage that exists today and of the damage that PANE alleges would be caused by the restart of TMI-1. The aspect of restart that is most significant to the health damage now at issue is the potential for massive radiation exposure and physical health consequences from an accident at TMI-1.

This fact is central to the allegations in the contention that PANE filed with the Licensing Board:

> Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI-1 without endangering the public health and safety.

Appendix B, *infra*. [53]

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[52] In addition, as discussed more fully below, the socioeconomic impacts at issue in these cases are not "significant" under section 102(2)(C) in light of the goals and purposes of NEPA.

[53] As noted by the Utilities (Utilities Br. at 10), we did argue to the Licensing Board that the psychological harm would be caused even if the reactor were rendered absolutely safe. This assertion relates to the specific characteristics of post-traumatic stress disorder as recognized in American Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 237 (3d ed. 1980), and it would involve the factual question of whether reactor operation by itself, even if "absolutely safe," would be sufficient to traumatize the population. PANE had no need to make any such factual showing.

(footnote continued)

In *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 538-39, this Court recognized the principle that a federal agency must consider not only the immediate and definite environmental effects of its actions, but also those effects that are reasonably foreseeable. *Accord, Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 830 (D.C. Cir. 1977). Insofar as NEPA requires an EIS for the remote effects of serious radiation exposure as in *Vermont Yankee*,[54] NEPA also requires an EIS for health effects that are the foreseeable and immediate result of the potential for such serious radiation exposure. It is difficult to imagine a tighter chain of proximate cause between the effect on the physical environment and the damage to human health.[55]

In their brief, the Utilities emphasize the extensive nature of the safety review that has taken place with respect to TMI-1 since the accident at TMI-2. (Utilities Br. at 9-10, 33-34). They imply that the facility must therefore be considered safe such that an accident similar to TMI-2 or worse could not occur again, and thus, that the potential for such an accident should not be considered in deciding whether TMI-1 should be restarted. The President's Commission, however, disagreed with this proposition that the risk of future accidents need not be taken into account:

> [W]e must not assume that an accident of this or greater seriousness cannot happen again, even if the changes we recommend are made.[56]

(footnote continued)

however, because its allegation specifically incorporated the prospect of a future accident as one of the reasons for the psychological health damage that would be caused by restart. The legal rulings thus far have correctly been based upon PANE's allegations.

[54] *Cf.* 10 C.F.R. § 51.23(c), requiring consideration of the health effects of the uranium fuel cycle.

[55] The Commission's argument that the alleged psychological health damage is not related to the physical damage because it simply "flows from a common source" and is not otherwise relevant to the physical damage (NRC Br. at 45) is utterly at odds with reality and with PANE's contention. The health damage flows from the restart source *because* the potential for physical damage also flows from that source.

[56] *President's Commission Report, supra* note 3, at 15 (J.A. 93).

Indeed, as a result of the accident at TMI-2, the NRC has ordered that each environmental impact statement on a proposed nuclear reactor must consider the consequences of a catastrophic accident involving "releases of radiation and/or radioactive materials" from the reactor. 45 Fed. Reg. 40,101 (1980). This constitutes a reversal of a previous position in which the consequences of such reactor accidents were not examined in the NEPA process because they were considered to be too remote to justify evaluation and disclosure. *Id.* [57]

Thus, the Commission finds itself in an extraordinary position: it orders that the highly remote, potential releases of radioactivity in a nuclear accident be considered in environmental impact statements; at the same time, it argues that the immediate, direct human health consequences of those potential releases should be ignored. This effort to create a dichotomy among the kinds of health consequences that may arise from an environmentally related federal action is contrary to the goals and purposes of NEPA discussed earlier, *supra* at 18-19, 25, and to the principle that federal agencies must consider the reasonably foreseeable effects of their environmentally related actions. *See* discussion, *supra* at 31.[58]

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[57] Extrapolating from their premise that the potential for a serious accident need not be considered, the Utilities argue that psychological health hazards caused by concern about future accidents cannot be considered because the concern is irrational. (Utilities Br. at 33-34). Assuming, *arguendo*, that the Utilities are correct that the concern or fear that triggers the psychological health damage is unreasonable, the assertion proves nothing. The fact remains that restart will cause psychological health damage, which is a central concern of NEPA. The Utilities cannot wish this fact away by claiming that the fear is irrational, or by asserting that the psychological health damage is not "actual harm." (Utilities Br. at 20-21). Any health damage is "actual harm" cognizable under NEPA if it is related to the environment, as we have shown is the case here.

Indeed, the Licensing Board itself urged the Commission "to reject out of hand" arguments that this psychological health damage should be ignored because the underlying fears are irrational. The Board based that assertion on the simple fact that "the scheme of nuclear energy regulation assumes that commercial energy reactors are inherently dangerous but potentially safe." *Board Certification, supra* note 17, 11 N.R.C. at 304 (J.A. 39).

[58] The Commission also argues that the proposition that this psychological health damage is related to the potential for harm from a future

(footnote continued)

3. The measurability of psychological health damage is an issue for determination by the agency based on a factual record.

As did the dissent below (Pet. App. 40a-41a), the Utilities challenge the consideration of psychological health damage here on the ground that such damage is not adequately measurable to permit consideration by the Commission. (Utilities Br. at 27-28 & n.27).[59] They base this argument on three

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(footnote continues)

accident is not within the scope of the issues that were before the Commission because the Commission referred only to psychological damage "unrelated directly to exposure to radiation." (NRC Br. at 44). But the Commission was referring to "*aspects of the Three Mile Island accident*" unrelated to radiation exposure. (J.A. 20). To the extent that it was excluding radiation exposure from consideration with respect to psychological health damage, it was excluding only the radiation exposure that occurred during the TMI-2 accident. Moreover, PANE's contention is cognizable under a separate provision of the Commission's order allowing arguments that the "short term actions" recommended as prior conditions for restart would not assure the "health and safety of the public" if restart were authorized (J.A. 19). Finally, the Commission's argument is inappropriately introduced at this stage of the litigation because our contention specifically raised the significance of the prospect of a future accident, and no party has argued that the contention was outside the scope of the Commission's order.

[59] It is significant that the Commission has not challenged the cognizability of psychological factors under NEPA on measurability grounds. (NRC Br. at 28 n.19, 39-40 n.28). Any such challenge would be disingenuous since the Commission has already, apparently of its own accord, examined the psychological impacts of another type of radiation disaster well before this case was decided below. *City of New York v. United States Dep't of Transportation*, 539 F. Supp. 1237, 1273 (S.D.N.Y. 1982). (Although DOT was the defendant, the psychological study was prepared for the NRC. *Id.* at 1244.) The Utilities appear to cite *City of New York* as similar to this case on the ground that it arguably involved agency evaluation of "public fears" (Utilities Br. at 25 n.25). The two, however, are unrelated. To the extent that *City of New York* required consideration of "public fears," it did so under a specific CEQ regulation concerning controversial federal actions affecting the environment, 40 C.F.R. § 1508.27(b)(4) (1982), which is not at issue here. Moreover, there was apparently no allegation of harm to human psychological health in that case, nor was there a previously traumatized population, as is true here. The "public fears" in *City of New York* would not be cognizable under NEPA under either the decision below in this case or the analysis presented in this brief.

cases that discuss "psychological factors" only in passing. They are *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir.), *cert. denied*, 412 U.S. 908 (1973) (*Hanly II*), and *First National Bank of Chicago v. Richardson*, 434 F.2d 1369 (7th Cir. 1973), both of which involved the siting of correctional facilities in cities, and *Maryland-National Capital Park and Planning Commission v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973), which involved an influx of low-income workers into an area to staff a postal facility. Each of these courts expressed doubt whether psychological factors are sufficiently measurable to be considered under NEPA.

However, neither *Hanly II* nor *First National Bank of Chicago* turns on the deciding court's doubts about the measurability of psychological factors. In *Hanly II* the court explicitly stated that it would not decide the issue.[60] *Hanly II*, 471 F.2d at 833; *First National Bank of Chicago v. Richardson*, 484 F.2d at 1380 n.13. In each of these cases, the courts used the word "psychological" to refer loosely to vague assertions of community concern about the proposed facilities. Indeed, in the *Maryland-National Capital* case, the court's reference to "psychological factors" occurred in the context of a discussion of esthetic effects. *Maryland-National Capital*, 487 F.2d at 1038. These courts were not faced with and did not rule on whether any psychological health effects are cognizable under NEPA.

More important, and fundamental to administrative law and to NEPA, the question of whether psychological effects are measurable is one of fact. As a question of fact, it must be considered by the agency in the first instance. *Kleppe v. Sierra Club*, 427 U.S. 390, 413-14 & n.25 (1976). *See also, County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1383 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978). The Second Circuit applied this principle in *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), which was decided after the same court had expressed doubts about measurability in *Hanly II*. Recognizing the fundamental limitation on its role with respect to factual issues, the court

[60] Judge Friendly issued a strong dissent in *Hanly II*, contending that there is no reason for doubt that psychological effects should be considered, and arguing, on the basis of the statutory language, that they must be considered. 471 F.2d at 839.

squarely admitted that it did not "know whether informed social scientists would conclude that the top of the VMF would likely become a human jungle." Accordingly, it remanded the case to the agency to make that determination.[61]

To the extent that the decision in this case turns on a factual issue such as the measurability of the alleged psychological health damage, the same result must obtain. *Kleppe v. Sierra Club*, 427 U.S. at 410. The agency's factual decision will then be upheld if it is not arbitrary, *id.* at 413-14 & n.25. In any case, the judiciary may not usurp the role of the administrative agency in making factual findings.

The Utilities' reliance upon measurability is truly misplaced in the NEPA context. NEPA's implementation provisions are devoid of precise quantification requirements. The very point of the statute is to require federal agencies to gather whatever information is available concerning the environmental effects of their actions, and to take that information into account. All that is required is a reasonable effort to forecast the effects. *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

In any event, the only fact finding body involved in this case has already ruled in favor of PANE on this issue. The Licensing Board found that PANE had "established a sufficient prehearing basis for the premise that the [psychological]

[61] The Utilities and their *amici* Edison Electric Institute and Scientists and Engineers for Secure Energy rely on an extensive line of cases for the proposition that the psychological health damage here is too remote and speculative to be considered by the Commission. (Utilities Br. at 35-36, EEI Br. at 15, SE_2 Br. at 11-12). Since the agency has done no factual analysis of the issue, these arguments seek a ruling that the health damage alleged here is too remote and speculative solely *as a matter of law*, just as the Utilities must be arguing that psychological effects are immeasurable as matter of law. This position is unsupportable. The cases cited by the Utilities and their *amici* are probably the single strongest line of authority in support of PANE's position on this issue. In each of them, one of two results obtained: either the agency decision not to consider alleged effects on the ground that they were too remote or speculative was upheld *on the basis of a factual record*, or the court directed the agency to develop such a record. No such record has been compiled in this case.

effects are measurable."[62] As discussed above, that determination must stand unless it is found to be arbitrary. No party has argued that the threshold ruling was arbitrary.[63]

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[62] *Board Certification, supra,* note 17, 11 N.R.C. at 302 n.8 (J.A. 36 n.8). The Utilities and *amicus* SE_2 have emphasized that the Licensing Board held that it could not determine how evidence with respect to psychological health damage could be used in a "full blown cost-benefit analysis." However, there is no requirement for such an analysis, only for the best use of the available information. *See, e.g., Robinson v. Knebel,* 550 F.3d 422, 426 (8th Cir. 1977). Indeed, section 102(2)(B) of NEPA, 42 U.S.C. § 4332(2)(B), specifically recognizes that many "environmental amenities and values" are not quantifiable in the usual sense. Under that provision, and under NEPA as a whole, agencies are nonetheless required to take such environmental concerns into account. Agencies need only give those concerns "appropriate consideration," since conventional quantification is not possible.

[63] As noted, this was a threshold determination for the purpose of determining whether the facts should be litigated further. In the remanded proceeding, PANE would expect to submit evidence showing, first, that restart of TMI-1 would cause further harm to psychological health, and second, that the harm would be severe.

PANE would rely upon the sort of scientific evaluations that support the conclusions of the President's Commission, *supra* note 3, and that are described in the *amicus* brief of the American Psychological Association. *See also* Comment, *Negligently Inflicted Mental Distress: The Case for an Independent Tort,* 59 Geo. L.J. 1237 (1971); and Comment, *Neurosis Following Trauma: A Dark Horse in the Field of Mental Disturbance,* 8 Cum. L. Rev. 495 (1977) (both discussing the justiciability of psychological damage, particularly with respect to post-traumatic conditions similar to those alleged here).

Contrary to the assertions of the Utilities and *amicus* SE_2 (Utilities Br. at 35, SE_2 Br. at 29), this is precisely the kind of case in which it is well within the competence of the scientific community to make a reasonable prediction of the reaction of a population to an impending event. The current psychological condition of those individuals traumatized by the accident at TMI-2 is the same as or similar to "post-traumatic stress disorder." *DSM-III, supra* note 35 at 236-37. Those affected by this type of condition may be expected to suffer further trauma from an event such as the restart of TMI-1. PANE has already submitted two evaluations on this point to the Commission since the original judgment was issued by the court below. *See* R. Holt, Ph.D., A Selective Review of Research on Health Effects of the Accident at Three Mile Island, *and* J. L. Titchener, M.D., Report of the University of Cincinnati Study of the Psychological Impact and Long-Term Consequences of the Accident at Three Mile Island. Both studies were filed with the Commission on May 12, 1982.

The Licensing Board's decision that PANE's contentions met the measurability threshold is an administrative judgment about the requirements for participation in an agency proceeding. Judicial review of such procedural decisions by the agency is strictly limited. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553-54 (1978).

II. NEPA's Inherent Statutory Limitations and the Breadth of Agency Discretion in its Implementation Assure No Unduly Broad or Burdensome Application of the Decision Below.

Petitioners suggest that the decision below to require the consideration of potential psychological health damage in this case would also apply to a wide range of federal actions, pose an undue burden on federal agencies, and require the permanent shutdown of TMI-1. These arguments ignore the explicit limitations of NEPA and the extremely broad range of agency discretion in evaluating environmental concerns and taking them into account in decisionmaking.

A. The threshold requirement for significant environmental effects inherently limits the application of section 102(2)(C) of NEPA.

The Commission argues that the decision below treats "any and all health effects as environmental impacts," such that NEPA could be extended to drug approval actions of the Food and Drug Administration, the termination of government health support systems and a range of other federal activities. (NRC Br. at 28). This argument ignores the factual context in which the decision was reached.

The court below did not rule in a vacuum, but in the context of the environment that PANE had alleged and argued had been created "in the area surrounding the reactors at Three Mile Island." (Br. for Petitioner below at 42). Thus, the court limited its ruling to the particular health effects arising among the "neighboring residents" of the Three Mile Island area. (Pet. App. 16a). Although the "potential effect on health," *id.* is, indeed, the key to the decision below, there is nothing in the

opinion to suggest that a health effect, *per se*, independent of an environmental nexus, would be cognizable under NEPA.

The decision below is consistent with the explicit limitations contained in section 102(2)(C), which establishes two threshold tests that limit the scope of the decision and of section 102(2)(C) itself. First, there must be an effect on "the quality of human environment." Second, the effect must be significant. These tests, rather than the tautological construction urged by the Commission ("physical and natural environment"), are the explicit limiting principles of NEPA.

Because NEPA requires an effect on the environment, in this case the environment surrounding the reactors at Three Mile Island, claims involving drug approval and suspension actions by the FDA would not fall under NEPA.[64] The health impact of such a decision is not related to any particular geographical area, whether local or nationwide; it is not inherent in the human surroundings. Whereas an individual may choose whether or not to take a drug, and thus whether to risk health damage, an individual may not, short of leaving the environment, choose whether to be harmed by threats inherent in the environment. As we have shown, the purpose of NEPA is to protect the viability of the environment so that it can continue to support healthy human existence and need not be abandoned.

The limitation to an effect on the human surroundings also eliminates NEPA claims with respect to decisions to cut funding for government health services. (NRC Br. at 28). Although those decisions may relate to particular geographic areas, they do not affect the inherent nature of the surroundings in those areas such that health would be harmed simply by virtue of the cutback. Any harm to health would have some cause other than reduction of funding for health services in the particular surroundings. The cutback would constitute a federal decision

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[64] We note that FDA regulations do require the preparation of NEPA analyses with respect to drug approval actions where those actions may significantly affect the human environment. 21 C.F.R. Part 25 and § 25.1(f)(1).

not to act, to which NEPA does not apply. *Defenders of Wildlife v. Andrus,* 627 F.2d 1238, 1244 (D.C. Cir. 1980).[65]

While the environmental effect test provides some guidance, the limitation to a significant effect was specifically intended by Congress to assure the manageable implementation of NEPA. An earlier version of what is now section 102(2)(C) referred to "significant Federal actions affecting the quality of the human environment." In an effort to narrow NEPA's application, the Bureau of the Budget, representing the President, proposed the significance limitation that now appears in the statute.[66] The Senate Committee specifically adopted that proposal.[67]

The first question under the significance test is whether the alleged effect is significant in terms of the goals and purposes of the statute. *Philbrook v. Glodgett,* 421 U.S. at 713. *Cf., First National Bank of Chicago v. Richardson,* 484 F.2d at 1373 (recognizing the significance test as partly an issue of law). If it is not, it is not cognizable under NEPA as a matter of law. The agency need undertake no further consideration of the issue. Thus, moral or spiritual "effects" of federal actions (NRC Br. at 31), even if somehow related to particular environments, are not cognizable under NEPA because those concerns are not central to the purpose of the statute. For the same reason, strictly social and economic effects, or effects involving the relationships among groups of people, such as those addressed in several cases cited by petitioners,[68] do not trigger the requirement for an environmental impact statement.

Only if the effect of a federal action is related in some way to the environment and is significant in terms of the goals and purposes of the statute would an agency be required to

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[65] Moreover, the FDA example, as well as any other governmental decisions involving agencies directly responsible for protecting human health, may also be excluded from NEPA on the ground that the protection they provide is exactly what NEPA would accomplish in safeguarding human health. *See, e.g., Environmental Defense Fund v. Environmental Protection Agency,* 489 F.2d 1247 (D.C. Cir. 1973).

[66] S. Rep., *supra* note 33 at 27-30, 40-41.

[67] *Id.* at 11.

[68] *See* discussion, *supra* at 28 note 50.

undertake a factual analysis. As we discuss below, even then the agency has considerable discretion in pursuing that task, and its decision is subject to a narrow, highly deferential standard of review.

B. NEPA's fundamentally procedural mandate minimizes any burden of implementation.

According to the Utilities, the decision below implies that the Commission "could not license a plant otherwise found safe if some local residents have conceived a fear and distrust of nuclear power that is sufficiently severe and intense." (Utilities Br. at 40).[69] This assertion is nonsense. The Utilities have identified nothing in the decision below that supports this interpretation; the decisions of this Court firmly establish the contrary.

The most that can be said of the decision below is that it could result in an agency decision that an environmental impact statement should be prepared. Once the statement is completed, however, nothing in NEPA would actually require the Commission to prevent the restart of TMI-1 if the Commission, in its discretion, did not wish to do so.

> On the contrary, once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot " 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.' "

Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227-28 (1980), quoting *Kleppe v. Sierra Club,* 427 U.S. at 410 n.21. [70]

This legal principle governs every possible stage of the Commission's consideration of psychological health damage in

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[69] *See also* Utilities Br. at 34, where it is suggested that the decision below would require the Commission "to override sound technical judgments, congressionally determined to be in the Nations's best interest, because of irrational, albeit genuine, fears and anxieties."

[70] We note that even Commissioner Bradford, who most strongly supported consideration of psychological health damage, expressed doubt that the actual restart of TMI-1 would hinge on this issue. (Pet. App. 93a).

this case. The immediate requirement is that the Commission determine whether the potential psychological health impacts of restart are significant, such that an environmental impact statement must be prepared. 40 C.F.R. § 1501.4 (1982). Although PANE would attempt to show otherwise, the Commission could determine that no EIS is required because, for example, (1) the probable psychological health impact of restart would not be significant as a matter of fact, (2) there is no psychological health impact, or the alleged impact is so remote or speculative that it could not usefully be considered in an EIS, or (3) the alleged psychological health impact could not, as matter of fact, be measured in a way that would allow either a determination of its significance or the useful consideration of the available information in reaching the ultimate decision. Any of these decisions, and any others the Commission might reach, would be upheld if they were reasonable. *Carolina Environmental Study Group v. United States,* 510 F.2d at 796, 798 (D.C. Cir. 1975).

If the Commission decided to prepare an EIS, the standard of review would again be very narrow. As long as the Commission had carefully examined the allegation and fairly considered the available information, the EIS itself would withstand judicial review.[71] *National Helium Corp. v. Morton,* 486 F.2d 995, 1001-05 (10th Cir. 1973). Moreover, given the limited standard of review, PANE would be strongly discouraged from seeking judicial involvement if the Commission considered the available information.

Finally, as we have noted, the decision below does not bind the Commission to use any particular procedures in considering this issue. That question is now before the Commission itself, whose choice of procedures would, again, be entitled to considerable deference. *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 553-54.

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[71] The Commission is incorrect in suggesting that the requirement to consider psychological health damage would somehow threaten the "hard look" principle. (NRC Br. at 4). The issue is the same as any other in which potential human health impacts are to be evaluated using available scientific information and expertise.

C. The narrow scope of the decision below and the breadth of agency discretion minimize the burden of considering psychological health damage allegations in other situations.

The decision below is narrowly drawn, recognizing the application of NEPA to the alleged psychological health impact of a federal action only where there has been a previous traumatic event, and where there are "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." (Pet. App. 16a-17a). Only the circumstance at Three Mile Island meets these criteria, and the Commission itself has issued a Statement of Policy interpreting the decision below as applying only to comparable situations in which an accident has occurred.[72]

In addition to the narrowness of the decision itself, the Commission and any other federal agency to which such an issue might be raised has the discretion to rely upon reasonable threshold requirements to weed out insubstantial claims. This Court has itself emphasized that agencies may require

> intervenors who wish to participate to structure their participation so that it is meaningful, so that it alerts the agency to the intervenor's position and contentions. This is especially true when the intervenors are requesting the agency to embark upon an exploration of uncharted territory . . . .

Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. at 553. As *amicus* SE_2 has suggested, the agency may require a showing that an allegation such as PANE's contention is "susceptible of a reasonable degree of proof."[73]

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[72] 47 Fed. Reg. 31,762-63 (1982). The Commission's effort to disavow that Statement of Policy (NRC Pet. at 27-28 n.22) raises serious questions about the genuineness of its implemention of judicial decisions with which it disagrees. If the Commission honestly believed that the decision below must be widely applied, ethical and legal considerations would require that it implement the decision according to that belief.

[73] SE_2 Br. at 11. *Amicus* SE_2 attempts to argue that PANE's contention should be excluded from consideration on such a threshold test. But PANE passed the only threshold test applied by the Commission when the Licensing Board ruled that PANE had made a sufficient pre-hearing showing with respect to measurability. (J.A. 36 n.8). There has been no challenge to this ruling, so SE_2's argument must fail.

The Licensing Board did exactly that here, and PANE's contention met the test. The Commission or any other federal agency could apply a more stringent test in the future, particularly where the allegation involved "uncharted territory." This test could involve both an examination of the adequacy of the allegation itself and a requirement, such as that imposed by the Licensing Board here, that an initial factual showing accompany the allegation. In either case, an agency decision to accept or reject the allegation on the basis of such a test would, once again, be entitled to substantial deference. *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 553-54.

In its recent policy statement, issued pursuant to the decision below, the Commission adopted the threshold test of requiring a related pre-existing trauma in an area before it will consider a psychological health contention. 47 Fed. Reg. 31,762 (1982). This is a reasonable threshold since it is true that the examination of psychological health matters is not simple, and even knowledgeable experts have limited ability to make reliable predictions. One of the few situations in which such predictions are reasonable is that presented here—the existence of a previously traumatized population faced with a proposed federal action closely related to the cause of the original trauma. The pre-existing trauma provides a reasonable starting place for analysis, eliminating the vast majority of claims, yet reflecting the state of scientific knowledge and ability today.

Finally, even if the Commission were required to consider psychological health damage with respect to all of its licensing decisions, an action clearly not required by a reasonable reading of the decision below, the administrative burden would be minimal. The Commission clearly has the authority to undertake a generic examination of an issue of that sort. *State of Minnesota v. Nuclear Regulatory Commission,* 602 F.2d 412, 416 (D.C. Cir. 1979); *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 518. It could do so here. The only available information involves the population at Three Mile Island. Once the Commission had gathered and analyzed that information, it would need only to provide a thirty day period for public

comment before issuing a final rule applicable to all proceedings. That rule would be entitled to substantial deference as long as the required procedures had been followed.

* * * * *

In closing, we emphasize that this case involves a narrow question of interpretation of section 102(2)(C) of the National Environmental Policy Act. That section establishes a specific analytical framework with the following threshold questions: first, whether a federal action affects the quality of the human environment or surroundings, and second, whether the effect of the federal action is significant under the goals and purposes of NEPA. The psychological health damage at issue here meets both of those tests.

Most important, this case does not involve an attack on nuclear power in general. As this Court has held, Congress has chosen to try nuclear energy, and the courts may not contravene that decision. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 557-58. Similarly, Congress has chosen, through NEPA, to require federal agencies to consider all threats to human health, including psychological health, that may result from their actions affecting the quality of the human environment. Only Congress has the authority to alter that mandate.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals should be affirmed.

Respectfully submitted,

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January 29, 1983

Counsel for respondent acknowledge the assistance of Mary Elizabeth Nelson, a law student intern, in the preparation of this brief.

APPENDIX A

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4331 and 4332 provide as follows:

> Section 2, 42 U.S.C. § 4321: The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.
>
> Section 101, 42 U.S.C. § 4331: (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.
>
> (b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs,

and resources to the end that the Nation may

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Section 102, 42 U.S.C. § 4332:

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that

presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) The responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

APPENDIX B

PANE CONTENTION NO. 1:

1) Renewed operation of Three Mile Island, Unit 1 (TMI-1) would cause severe psychological distress to PANE's members and other persons living in the vicinity of the reactor. The accident at Unit 2 has already impaired the health and sense of well being of these individuals, as evidenced by their feelings of increased anxiety, tension and fear, a sense of helplessness and such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems. Such manifestations of psychological distress have been seen in the aftermath of other disasters. The possibility that TMI Unit 1 will reopen severely aggravates these problems. As long as this possibility exists, PANE's members and other persons living in the communities around the plant will be unable to resolve and recover from the trauma which they have suffered. Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI-1 without endangering the public health and safety.

APPENDIX C

EXECUTIVE OFFICE OF THE PRESIDENT

COUNCIL ON ENVIRONMENTAL QUALITY

722 Jackson Place, N.W.
Washington, D.C. 20006

February 14, 1980

Donald E. Hossler
501 Vine Street
Middletown, PA. 17057

Dear Mr. Hossler:

I am writing on behalf of the Chairman in response to your letter of December 14, 1979, concerning the decontamination of Three Mile Island. I regret the delay in responding to you, but we have no record of receiving your initial letter. You made several inquiries in that letter concerning the Council's role in the Nuclear Regulatory Commission's preparation of a programmatic impact statement to assess the TMI cleanup. Your questions and our responses are as follows:

> "What specific types of things will CEQ be doing regarding TMI cleanup?"

The Council, of course, will not be involved in any way with the actual cleanup of the TMI facilities. Pursuant to its authority under the National Environmental Policy Act, the Council will, upon request, advise the NRC as to how to prepare an adequate environmental impact statement. Council staff members recently toured the facility to better understand the problems confronting local, state and federal officials. The Council also has responded to the NRC's recent inquiries concerning the Council's regulations on the scoping process for the preparation of draft EISs.

> "2. What specific information will CEQ use to make decisions?"

CEQ is not authorized by statute to make decisions in this area. We will make available our expertise in complying with environmental laws. We anticipate that most of the inquiries by the NRC will be legal in nature, requiring the Council to use its own regulations, NEPA and interpretive caselaw for the development of responses.

> "3. Are you concerned with technical data only, or do you consider psychological feelings not necessarily quantified but known also?"

NEPA requires a thorough consideration by agencies of the significant direct, indirect and cumulative impacts of their proposed actions on the human environment. The Council's regulations specifically reiterate this principle. 40 C.F.R. §§ 1502.16, 1508.8, 1508.14. For the purposes of NEPA, "effects on the human environment" include the full range of potential health effects on human beings.

Please contact the Council again in the future if any new questions arise concerning our involvement at Three Mile Island.

Sincerely,

(signed)

JOHN SHEA, III
Counsel

cc: Senator John Heinz, III